

**AMENDED CLAIMS**

[(received by the International Bureau on 20 December 2005 (20.12.05);  
original claims 1-6 amended; remaining claims unchanged (2 pages)]

**+ STATEMENT**

1. A microvalve device comprising:

a macro-sized first valve including:

a plurality of layers defining a body, the body having a chamber and a plurality of ports in fluid communication with the chamber, at least two of the plurality of ports forming a portion of a first fluid circuit, and at least two of the plurality of ports forming a portion of a second fluid circuit; and

a movable portion positioned within the chamber by a control pressure acting thereon, the movable portion being selectively movable to control a fluid flow in the second fluid circuit, said movable portion being one of a flat spool or a round spool; and

a multiport microvalve for controlling fluid flow in the first fluid circuit to affect the control pressure acting upon the moveable portion, the control pressure determined by a position of the multiport microvalve;

wherein the movable portion of the first valve is selectively controllable between a first position where there is fluid communication between the ports of the second fluid circuit and a second position where fluid communication between the ports of the second fluid circuit is prevented.

2. The microvalve device defined in Claim 1 wherein the first fluid circuit comprises a first fluid source and a first fluid reservoir;

wherein the multiport microvalve is selectively movable to:

a first position to allow fluid flow from the first fluid source to the chamber to close the first valve; and

a second position to allow fluid flow from the chamber to the reservoir to open the first valve.

**AMENDED SHEET (ARTICLE 19)**

3. The microvalve device defined in Claim 1 wherein in a first position of the microvalve fluid flows from the chamber to a reservoir to decrease the control pressure and open the first valve, and in a second position of the microvalve fluid flows from a supply to the chamber to increase the control pressure and close the first valve.

4. The microvalve device defined in Claim 3 wherein a first port of the second fluid circuit is connected to a load and a second port of the second fluid circuit is connected to a source.

5. The microvalve device defined in Claim 4 wherein opening of the first valve by the microvalve allows fluid flow from the source through the first valve to the load.

6. The microvalve device defined in Claim 5 wherein closing of the first valve by the microvalve prevents fluid flow from the source through the first valve to the load.